



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,183	09/24/2003	Hans-Werner Riel	RIEL1	4032
1444	7590	12/01/2004	EXAMINER	
BROWDY AND NEIMARK, P.L.L.C.			KING, BRADLEY T	
624 NINTH STREET, NW				
SUITE 300			ART UNIT	
WASHINGTON, DC 20001-5303			PAPER NUMBER	
			3683	

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/668,183

Applicant(s)

RIEL ET AL.

Examiner

Bradley T King

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 9 and 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10 and 12-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/04, 9/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

---

**DETAILED ACTION**

***Election/Restrictions***

Applicant's election with traverse of Species I in the reply filed on 08/30/2004 is acknowledged. The traversal is on the ground(s) that the species are sufficiently similar and should all be searched. This is not found persuasive because the species disclose different and distinct features which make the search burdensome.

The requirement is still deemed proper and is therefore made FINAL.

Claims 9 and 11 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected embodiment, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 08/30/2004.

Claim 9 requires a helical spring which is specific to the nonelected embodiments of figures 4 and 6.

Claim 11 requires a cylindrical pin which is specific to the nonelected embodiment of figure 7.

***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

---

---

***Information Disclosure Statement***

The information disclosure statement of 9/24/2003 references a German search report, however, the report does not appear to be provided. Please submit a copy so that the record is clear and complete.

***Claim Objections***

Claim 1 is objected to because of the following informalities: the limitation "wherein an automatic valve for interconnection of the sectional casing chambers by an automatic overflow connection" is grammatically awkward. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 8, 10 and 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mintgen et al (US# 5116028).

Mintgen et al discloses a gas spring including; a casing 11, which is filled with a free-flowing pressure fluid and has a central longitudinal axis; a guide and seal unit,  
which closes a first end of the casing 11; a piston rod 17, which has an outer end and is

---

---

sealingly extended through the guide and seal unit out of the first end of the casing 11; a piston 12, which is connected to the piston rod 17 and sealingly 12a guided in the casing 11; a pressure-fluid-filled first sectional casing chamber 14, which is unilaterally defined by the piston 12; an energy accumulator 16 for exercising pressure on the pressure fluid; a pressure-fluid-filled second sectional casing chamber 13, which is connectable to the first sectional casing chamber 14; and a controllable valve 31-32 for interconnection of the sectional casing chambers by an actuation/overflow assembly, the valve having a valve pin 19, which is movable from outside the casing into an open position of the controllable valve and into a shut-off position; wherein an automatic valve 26a for interconnection of the sectional casing chambers by an automatic overflow connection 23, the automatic valve comprising a valve element 26a, which is pre-loaded in a shut-off position such that, in the valve-pin shut-off position of the controllable valve, opening the automatic valve into an open position takes place only when an overcoming force F1 works between the piston rod and the casing in a piston-rod push-out direction. See column 4, lines 62-68. Mintgen et al lack the explicit disclosure of the relation of the force F1 to the spring push-out force as required by the claim. It would have been obvious to one of ordinary skill in the art at the time the invention was made to determine the appropriate forces for the valving through routine design and/or experimentation to achieve the desired spring and operating characteristics of the device, thereby providing the desired spring force, behavior and proper overload protection. Also note *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

---

---

Claims 1-8, 10 and 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 1101972.

EP 1101972 discloses a gas spring including; a casing 1, which is filled with a free-flowing pressure fluid and has a central longitudinal axis; a guide and seal unit, which closes a first end of the casing 1; a piston rod 8, which has an outer end and is sealingly extended through the guide and seal unit out of the first end of the casing 1; a piston 13, which is connected to the piston rod 8 and sealingly guided in the casing 1; a pressure-fluid-filled first sectional casing chamber 4, which is unilaterally defined by the piston 13; an energy accumulator 3 for exercising pressure on the pressure fluid; a pressure-fluid-filled second sectional casing chamber 5, which is connectable to the first sectional casing chamber 4; and a controllable valve 11 for interconnection of the sectional casing chambers by an actuation/overflow assembly, the valve having a valve pin 16, which is movable from outside the casing into an open position of the controllable valve and into a shut-off position; wherein an automatic valve 18 for interconnection of the sectional casing chambers by an automatic overflow connection 19, the automatic valve comprising a valve element 21, which is pre-loaded in a shut-off position such that, in the valve-pin shut-off position of the controllable valve, opening the automatic valve into an open position takes place only when an overcoming force F1 works between the piston rod and the casing in a piston rod push-out direction (as broadly recited). EP 1101972 lacks explicit disclosure of the relation of the force F1 to the spring push-out force as required by the claim. It would have been obvious to one of ordinary skill in the art at the time the invention was made to determine the

---

---

appropriate forces for the valving through routine design and/or experimentation to achieve the desired spring and operating characteristics of the device, thereby providing the desired spring force, behavior and proper overload protection. Also note *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Regarding claim 4, the valve body is illustrated as a composite body with a non-metallic layer.

Regarding claims 5-6, EP 1101972 lacks the explicit disclosure of the materials for the composite valve. The examiner takes official notice that metal substrates and plastic or rubber materials are well known in valve design. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select a metal substrate and a plastic or rubber layer for the materials of the composite valve body of EP 1101972 as an routine part of engineering design and material selection, thereby providing appropriate valve stiffness and ensuring proper sealing of the flow passages.

### **Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US#'s 4784375 and 3762514. Both show gas springs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley T King whose telephone number is (703) 308-8346. The examiner can normally be reached on 11:00-7:30 M-F.

---

---

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on (703) 308-0830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BTK

*Robert A. Siconolfi* 4/28/06  
ROBERT A. SICONOLFI  
PATENT EXAMINER

---